20X DVD Writer

Supports DVD+/-RW, and DVD-RAM writing

User's Manual

CAUTION
CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN.
AVOID DIRECT EXPOSURE TO BEAM.
VORSICHT
KLASSE 3B SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG WENN GEOFFNET. NICHT IN DEN STRAHL SEHEN.
ATTENTION
RADIATION DU FAISCEAU LASER VISIBLES ET INVISIBLES DE CLASSE 3B EN CAS D'OUVERTURE. EVITER TOUTE EXPOSITION AUX RAYONS.

Copyright Statement

It is a criminal offence, under applicable copyright laws, to make unauthorised copies of copyright-protected material, including computer programs, films, broadcasts and sound recordings. This equipment should not be used for such purposes.

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

FCC Warning Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can emit radio frequency energy and, if not installed or used in accordance with the instructions, may cause interference to radio communications. However, television reception interference can be determined by turning the equipment off and on. The user is encouraged to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FOR EUROPE

CE "The drive is in conformity with the EMC directive and low-voltage directive."

WEEE LOGO

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

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INTRODUCTION

Welcome to a multimedia world of ReWritable technology with DVD burning capabilities. This multiformat recordable drive presents you more backup choices other than acting as a CD-R/RW drive and as a DVD-ROM reader. The drive supports DVD Forum's DVD-R/RW/RAM standard as well as that of DVD+RW Alliance's DVD+R/RW enabling excellent compatibility, simple, quick recording of both CD/DVD formats, huge capacity storage, and theater-quality playback.

The bundled application software offers the creation fun of video, photos, and music editing in addition to basic data backup. You can record up to 8.5 GB, 4 hours of TV shows or movies with high-quality MPEG2 video/AC-3 sound effect, and even more appealing, author your own DVD movies – from capture to editing and burning.

Handy, easy to use with rich function, this DVD Writer is an ideal model to enjoy the fascinating digital entertainment on your desktop and here are some more important features:

- 20X DVD+R, 20X DVD-R, 8X DVD+R Double Layer, and 8X DVD-R Dual Layer writing, 8X DVD+RW, 6X DVD-RW, and 12X DVD-RAM rewriting, and 16X DVD-ROM reading
- 48X CD-R writing, 32X CD-RW rewriting, and 48X CD-ROM reading
- Supports writing modes of TAO, DAO, SAO and packet writing
- Compatible with most existing DVD-ROM drives and DVD video players
- Bundled with an extensive application software package

System Requirements

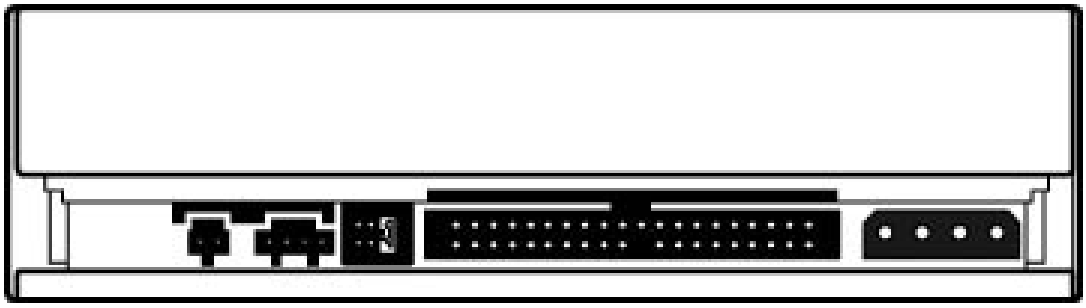
For IBM compatible PCs, the system requirements recommended are as follows:

- Pentium III, 800MHz or above with at least 256MB of memory
- Minimum 5GB free Hard Disk space
- IDE host interface supporting ATAPI MMC command
- Operating system: Microsoft Windows 98/ NT4.0/ 2000/ ME/ XP/ 2003/ Vista/ Linux

INSTALLATION

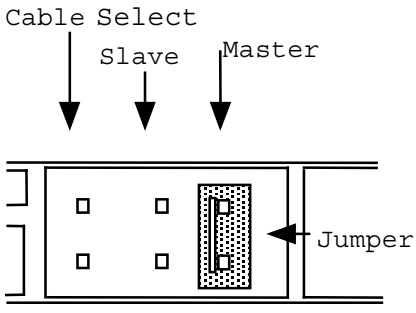
Host Interface Connections

Most mainboards have two IDE ports (primary and secondary), which can connect two IDE cables. Two IDE cables allow you to connect up to four devices, but it is recommended that you separate IDE ports for your hard drive and this writer. This will ensure that your hard drive's performance and speed won't be affected by having the writer on the same cable.



If you connect only one device on the cable, you can set the jumper as "MASTER" or "SLAVE".

If you connect two devices (e.g. CD-ROM & CD-RW) on the same cable, set different jumpers for each device (CD-ROM as "MASTER", CD-RW as "SLAVE", and vice versa.) The same rule applies to the connection of having your hard disk and another device on the same cable.

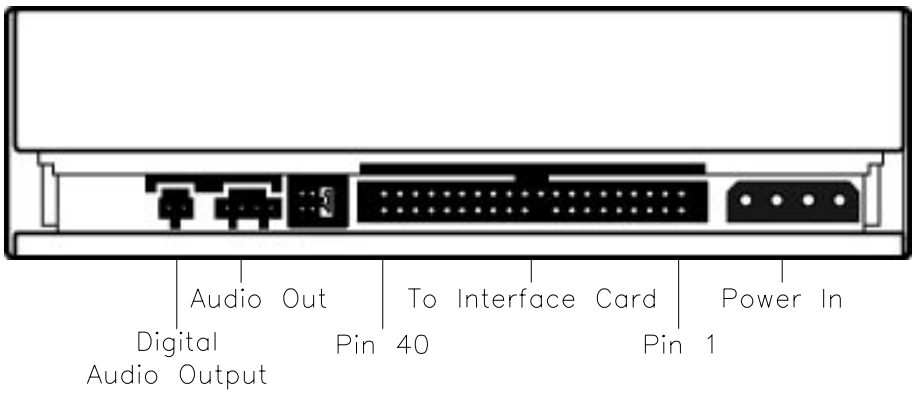


Hardware Installation

1. Turn off the power of the computer system.
2. Disconnect all cables from the back of your computer, and then remove the cover from the computer.
3. Insert the writer into one of the vacant 5.25" drive bays and secure it with screws to your PC.

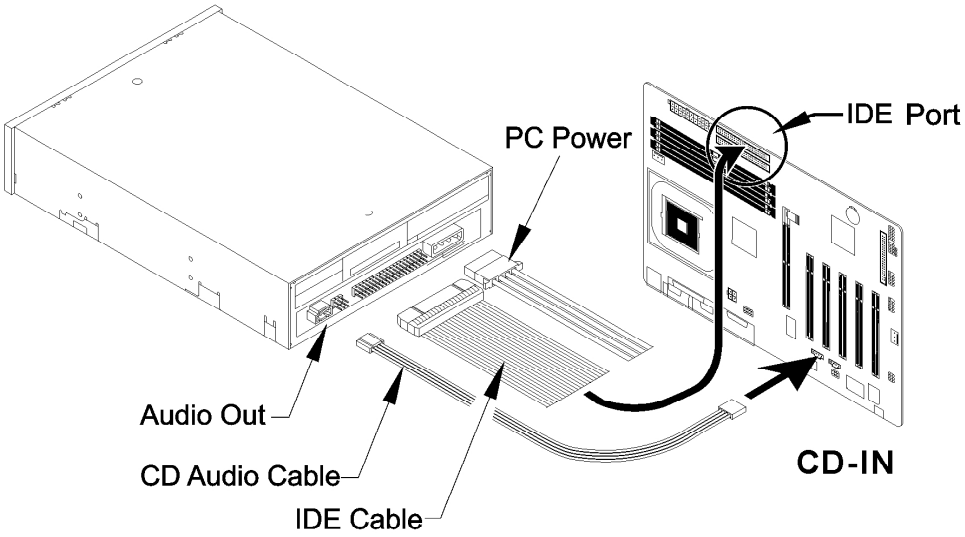
   ☞ ***In order to prevent interference between the writer and the computer, please mount the writer using all four mounting screws.***

4. Connect the 40-pin IDE cable from one of the IDE ports on the mainboard to the 40-pin connector of your writer. Also, connect the power supply cable to the back of the writer.



   ☞ *Make sure to align and connect the red-edge of the IDE Cable to Pin 1 on the drive.*

5. If you have a sound card that can be connected to this writer, you can connect the drive (as Audio-out) and the sound card (as Audio-in) with a 4-pin audio cable.



If your mainboad is integrated with built-in sound system, plug the 4-pin audio cable into the CD-IN connector on the mainboard as Audio-in.

6. Re-attach the cover of your computer, and reconnect the power cord.

Driver Installation

Windows Environment

This DVD writer is a Plug & Play device and there is no need to install driver. Windows can **automatically detect** the drive and load the appropriate driver.

Software Package (Optional)

The bundled package combines software for **1)** DVD/CD recording **2)** DVDs/VCDs authoring **3)** Packet Writing **4)** (VCD or DVD) playback, which gives you the complete solution for making audio/data CDs/DVDs of different formats, editing video and authoring DVD movies. The user-friendly interface simplifies the recording process and guides you through the creation in an easy and innovative way. No matter you are a novice or an experienced user; this is your best recording tools with the writer.

Installation Under Windows Environment

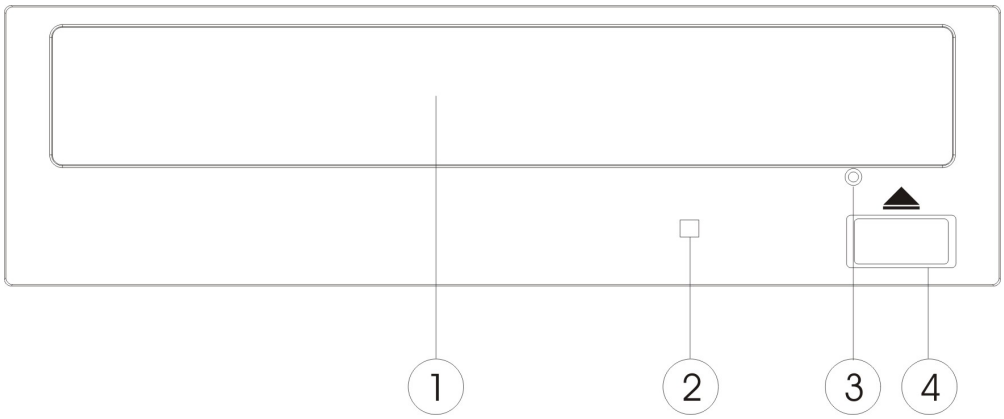
1. Insert the application CD and the installation program will run automatically. Then follow the on-screen procedures.

Or

2. Run**:\setup.exe** on the application CD.

CONNECTION & OPERATION

Front Panel



1. Disc Tray

Place the disc in the tray here, and then press the Close/Eject button or lightly push the tray to close it.

2. LED Indicator (Green color)

Flashes "**green**" while verifying, reading or writing discs.

3. Emergency Eject Hole

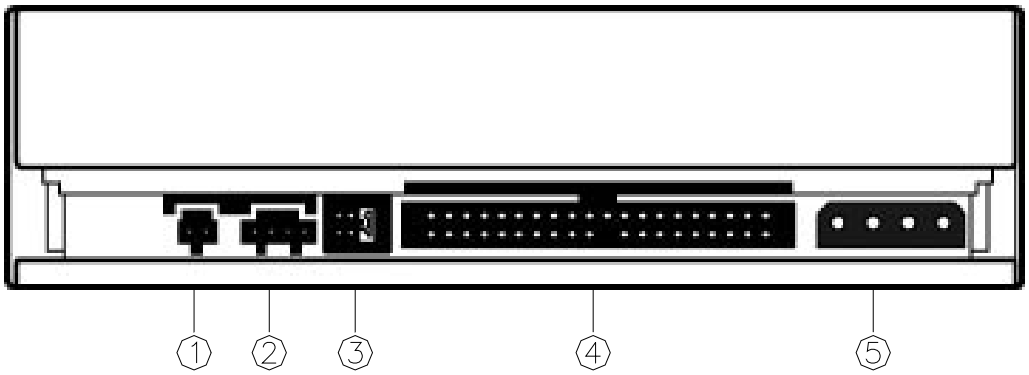
If the Close/Eject button doesn't work properly and the disc tray can't be opened, you can insert a paper clip or a small rod into this hole for manual ejection.
Please make sure to power off the system before you do that.

4. Close/Eject button

This button is used to open and close the disc tray. If the tray is closed, pressing the button will eject it.

NOTE: The front panel is subject to change without notice.

Rear View



1. **Digital Audio Output Connector**

   If your sound card has a digital audio IEC958 format connector, you can connect it to this digital audio output connector with a 2-pin audio cable.

2. **Analog Audio Output Connector**

   This connector allows you to connect the drive to your sound card with a 4-pin audio cable.

3. **Device Configuration Jumper**

   Set the jumper to Master, Slave or Cable Select according to your system configuration.

4. **IDE Interface Connector**

   Plug one end of the 40-pin IDE cable here to connect the 40-pin IDE connector on the motherboard. The red-edge of the IDE cable must be connected to Pin 1 of each connector.

5. **Power Supply Connector**

   By plugging the computer's power supply cable here, you can connect the drive and your computer system.

DVD REGIONAL CODE

Region Playback Control Management

All DVD Video Playback systems have “Region Playback Control” (RPC) which is required by Hollywood movie industry and defined by DVD Forum. You can only play DVD-Video discs with the same regional code as your DVD-Video Playback system.

As for DVD-ROM drives, one kind of the DVD-Video Playback system, there are 2 types:

RPC Phase 1 (as **RPC1**): RPC1 drives do not have built-in hardware support for region management. DVD-ROM drives of this kind do not play a part in controlling the playback region. It solely depends on the decoder.

RPC Phase 2 (as **RPC2**): RPC2 drives maintain the regional code change count information in hardware, and in general, the regional code of such drives can be changed up to 5 times by end users under some software decoder. (e.g. PowerDVD)

Regional Codes

Region 1: Canada, U.S.

Region 2: Japan, Europe, South Africa, and Middle East, Egypt

Region 3: Southeast Asia and East Asia

Region 4: Australia, New Zealand, Pacific Islands, Central America, Mexico, South America, and the Caribbean

Region 5: Eastern Europe, Indian subcontinent, Africa, North Korea, and Mongolia

Region 6: China

About This Drive

This DVD Writer is also a RPC2 DVD-ROM drive and the first regional code will depend on the DVD title you play. You are allowed to modify the regional code 5 times (including the initial one). After the fifth alteration, the regional code will be locked and only those DVD titles of the same regional code could be played afterwards, so set the code carefully.

TECHNICAL DATA

Interface	E-IDE/ATAPI
Disc Capacity	**DVD+/-R, DVD+/-RW:** Single layer 4.7GB Double layer 8.5GB **DVD-RAM:** 4.7GB **CD-R/RW:** 74min/650MB, 80min/700MB
Media supported for Writing	DVD+R, DVD+R DL, DVD-R, DVD-R DL, DVD+RW, DVD-RW, DVD-RAM, CD-R, CD-RW
Applicable Formats	(DVD) DVD-Video, DVD-ROM, Multi-Border, Multi-session, DVD-Audio, DVD-CPRM (CD) CD-ROM, CD-ROM XA, Photo CD, CD-I Ready, CD-DA, Enhance CD, UDF, Video CD, CD Extra, CD-TEXT
Writing method	(DVD) Disc at once, Random write, Sequential write, Incremental, Restricted overwrite, Layer Jump recording (CD) Disc at once, Track at once, Session at once, Packet Writing
Writing Speed	**DVD+R:** max. 20X **DVD-R:** max. 20X **DVD-RAM:** max. 12X **DVD+R DL:** max. 8X **DVD-R DL:** max. 8X **DVD+RW:** max. 8X **DVD-RW:** max. 6X **CD-R:** max. 48X **CD-RW:** max. 32X

Reading Speed	**DVD+/- R:**	max. 16X
	DVD-RAM:	max. 12X
	DVD+/-RW:	max. 12X
	DVD+R/-R DL:	max. 12X
	CD-R:	max. 48X
	CD-RW:	max. 40X
	CD-ROM:	max. 48X
	DVD-ROM:	max. 16X

Data Transfer Rate

CD -- **Read**
CD-ROM/CD-R: 7200KB/sec (up to 48X)
CD-RW: 6000KB/sec (up to 40X)

CD -- **Write**
CD-R: 7200KB/sec (up to 48X)
CD-RW: 4800KB/sec (up to 32X)

DVD -- **Read**
DVD-ROM: 21632KB/sec (up to 16X)

DVD -- **Write**
DVD+R: 27040KB/sec (up to 20X)
DVD-R: 27040KB/sec (up to 20X)
DVD-RAM: 16224KB/sec (up to 12X)
DVD+R DL: 10816KB/sec (up to 8X)
DVD-R DL: 10816KB/sec (up to 8X)
DVD+RW: 10816KB/sec (up to 8X)
DVD-RW: 8112KB/sec (up to 6X)

Access time	**DVD:**	160ms (16X)
	DVD-RAM:	160ms (12X)
	CD:	140ms (48X)

Data buffer 2MB

Disc loading	Tray
Dimensions (WxHxD)	148.4 x 42.2 x 170 mm
Weight	＜ 0.9 kg
Mounting Method	Horizontal & Vertical
Temperature	
Operating	5°C to 50°C
Non-operating	-40°C to 65°C
Humidity	
Operating	15% ~ 80%RH
Non-operating	5% ~ 95%RH

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